31445

S/620/58/000/025/003/004
D218/D302

Experimental verification of ...

right ascension could be determined. It was concluded that these preliminary results largely confirmed the expected advantages of the resonance amplification method. There are 3 figures and 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: M. Ryle, Proc. Roy. Soc. 211, A, 351, 1952; T. R. Witfield, M. N., 117, no.6, 1957.

SUBMITTED: June 1958

Card 3/3

4

S/022/60/013/01/08/010
C 111/ C 333

AUTHOR: Burunsuzyan, E. S.

TITLE: The Threshold of Reliable Statements and the Limit Sensitivity of Radiotelescopes

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 13, No. 1, pp. 141-152

TEXT: In order to determine the limit sensitivity for which a radiotelescope is still able to verify almost reliably discreet sources, the author uses the statistical theory of communication. Let t_A be the time which the source acts on the radiotelescope, t_o sidereal day, $p \approx \frac{t_A}{t_o}$. It is stated that the threshold of the reliable determination of a source is $\sqrt{2 \ln 1/p}$ - times higher than the threshold of the sensitivity of the apparatus. Therefore only those records on the recording band can serve as a proof of a source which are $\sqrt{2 \ln 1/p}$ - times greater than the threshold of the sensitivity of the apparatus.

ASSOCIATION: Byurakanskaya astrofizicheskaya observatoriya AN Armyanskoy SSR (Byurakan Astrophysical Observatory of the Academy of Sciences of the Armyanskaya SSR)

SUBMITTED: September 7, 1959

CARD 1/1

8430

6.9417 also 3002

S/022/60/013/003/006/006
C111/C222

AUTHOR: Burunsuzyan, E.S.

TITLE: On the Reliability of the Detection of Discreet Sources of Cosmic Radio Radiation

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 13, No. 3, pp. 123 - 132

TEXT: In his preceding paper (Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 13, No. 1) the author investigated the reliability of the detection of discreet sources of cosmic radio radiation and showed that the source can be found reliably if the corresponding antenna temperature exceeds a certain limit ("threshold of reliable statement"). There it was assumed that in the investigation of the initial fluctuations the observer is able to determine correctly the splashs which point to sources. However, the question how large the number "n" of observations must be in order that such a faultless identification of the splashs with the sources can be made, and how large is the real probability "p' ", remained unanswered. In the present paper this question

Card 1/2

84340

On the Reliability of the Detection of Discreet Sources of Cosmic Radio Radiation

S/022/60/013/003/006/006
C111/C222

is considered, the reliability of the identification is estimated as a function of "n". The following final conclusions are given:
1. For an advance of the reliability the dispersion of the initial fluctuation must be reduced by an averaging of the set of kinds of fluctuations and not by timely averaging. For equal thresholds several observations with an averaging of the results guarantee a greater reliability than a single observation with an integration of the initial fluctuation.
2. For correctly chosen parameters of the apparatus and for equal thresholds, interference methods show no advantages with respect to the interference security.

Card 2/2

BURUNSUZYAN, E.S.

Noise immunity of radio telescopes and threshold of reliable detection. Izv. AN Arm. SSR. Ser.fiz.-mat. nauk 14 no.6:125-129 '61. (MIRA 15:1)

1. Institut radiofiziki i elektroniki AN Armyanskoy SSR.
(Telescope, Radio)

L 1970-66 EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/EWA(h)/EWA(l) RPL GG/RM

ACCESSION NR: AP5020315 UR/0379/65/001/003/0394/0399

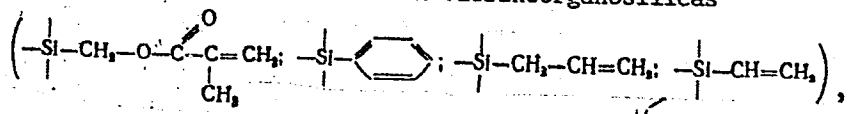
AUTHOR: Burushkina, T. N.; Chuyko, A. A.

TITLE: Free radicals in gamma-irradiated olefinoorganosilicas

SOURCE: Teoreticheskaya i eksperimental'naya khimiya, v. 1, no. 3, 1965, 394-399

TOPIC TAGS: aerosil, gamma radiation, electron spin resonance, silicon organic compound

ABSTRACT: The effect of gamma radiation on olefinoorganosilicas



which are chemically active fillers of polymeric materials, was studied. In order to determine the effect of surface on the properties and electron spin resonance (ESR) spectra of the chemically grafted free radicals formed, the ESR spectra of γ-irradiated methyl methacrylate aerosil and phenyl, allyl, and vinyl aerosils were investigated. Each of the irradiated compounds displays a characteristic ESR

Card 1/2

L 1970-66

ACCESSION NR: AP5020315

3

spectrum with a hyperfine structure whose degree of resolution is somewhat reduced by the effect of the grafting of the free radicals onto the surface of the silica. The splitting between the components of the hyperfine structure in the ESR spectra, with the exception of the spectrum of the phenylsilica, amounts to 23-25 Oe, which is characteristic of alkyl radicals. A change in the temperature of the samples during the recording of the spectra from -196 to 20°C causes an improvement of the line resolution in the spectra. The high thermal stability of the radicals is due to their bonding to the surface. Contact of the irradiated samples with air at 20°C leads to the transformation of the alkyl radicals into peroxide radicals. In all spectra except that of the allyl aerosil $(-\mathrm{Si}-\mathrm{CH_2}-\mathrm{CH_2}=\mathrm{CH_2})$ there is also observed a hyperfine splitting in hydrogen atoms ($\Delta Hp \cong 500$ Oe). Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN UkrSSR, Kiev (Institute of Physical Chemistry)

SUBMITTED: 20Dec54 ENCL: 00 SUB CODE: OC, GP

NO REF SOV: 011 OTHER: 006

Card 2/2 DP

L 22597-66 EWT(m)/EWA(d)/EWP(j)/T/ETC(m)-6 IJP(c) WW/GS/NH

ACC NR: AT6006249 SOURCE CODE: UR/0000/65/000/000/0085/0095

AUTHOR: Tertykh, V. A.; Burushkina, T. N.; Chuyko, A. A.

ORG: Physicochemical Institute, Academy of Sciences UkrSSR, Kiev (Institut fizicheskoy khimii Akademii nauk UkrSSR)

TITLE: Study of the surface chemistry of functional silicoorganic fillers interacting chemically with polymers

SOURCE: AN UkrSSR. Modifikatsiya svoystv polimerov i polimernykh materialov (Modification of the properties of polymers and polymeric materials). Kiev, Naukova dumka, 1965, 85-95

TOPIC TAGS: organosilicon compound, polymer, silica gel, silicon plastic, synthetic material, IR spectroscopy, EPR spectrum, gamma irradiation

ABSTRACT: Several silicoorganic fillers containing functional groups were prepared by reacting γ-aminopropyl, methylmethacryl, and styryltriethoxy silanes with hydroxy groups of silica gel. These fillers were subsequently used for improving the thermal and mechanical properties of organic polymers. The formation of bonds between various functional reactants and the silica gel surface was followed by IR spectroscopy (absorption bands of OH groups and N-H or $N-H_2$ vibration bands). For IR investigation, the discs of silicoorganic fillers of 0.2 mm in thickness and 1 cm^2 surface area

Card 1/2

L 22597-66
ACC NR: AT6006249

were prepared by compressing at 250 atm/cm^2. In order to examine the filler's structure, the fillers were γ-irradiated from Co^{60}-source and the EPR spectra were taken at -196° to +20°C. The EPR spectra of fillers heated to 60°C indicated the strong chemical bonds between functional organic silanes and silica gel surface. It is concluded that the methylmethacryl-type fillers can improve the mechanical properties of polymethacrylate resins. Orig. art. has: 4 figures, 2 tables, 3 formulas.

SUB CODE: 07/ SUBM DATE: 06Oct65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

BURUTINA, N.A.

Some physiological characteristics of a fungus causing alternaria spot of cotton. Nauch.dokl.vys.shkoly; biol.nauki no.4:103-106 '62. (MIRA 15:10)

1. Rekomendovana kafedroy nizshikh rasteniy Moskovskogo gosudarstvennogo universiteta im. Lomonosova.
(COTTON--DISEASES AND PESTS) (ALTERNARIA)

Burutto, I. V.

USSR/General Problems. Methodology, History, Scientific Institutions and Conferences, Instruction, Questions Concerning Bibliography and Scientific Documentation. A

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3464

Author : I.V. Burutto.
Inst :
Title : Part of Leningrad in Creation and Development of Vitamin and Citric Acid Industries of USSR.

Orig Pub: in symposium: Pishchevaya prom-st'. L., Sel'khozgiz, 1957, 187-203.

Abstract: No abstract.

Card : 1/1 -15-

BURVASER, F.G. [deceased], kand. tekhn.nauk.

Concrete wool. Biul. stroi. tekh. 12 no.1:15-17 Ja '55.
(MIRA 11:12)

1.Ukrainskiy nauchno-issledovatel'skiy institut sooruzheniy, stroitel'nykh materialov i sanitarnoy tekhniki.
(Mineral wool)

USSR/Virology, Human and Animal Viruses. Grippe Virus E

Abs Jour : Ref Zhur - Biol., No 4, 1959, No 14632.

Author : Burvikova V.I.
Inst : -
Title : The Early Diagnosis of Influenza by the Complement Fixation Test According to A.A. Smorodintsev.

Orig Pub : V sb.: Gripp., M. Medgiz, 1958, 135-142.

Abstract : No abstract

Card : 1/1

Burvits G. K.

BURVITS, G. K.

Burvits, G. K. Bacterial Diseases of Plants, Publishing House of the Academy of Science, USSR, Leningrad, 1936, 339 pp. 464.2 B91B

So: SIRA SI - 90-53, 15 Dec. 1953

BURY, Jozef

On new principles concerning the management of the personally undetermined wage fund. Praca zabezp spol 4 no.7:56-60 Jl '62.

BURY, Leszek, mgr.inz.

Puddle-clay constructions in the Rzeszow Voivodeship. Budown Wiejskie 14 no.4:20-21 Ap '62

1. Osrodek Instytutu Techniki Budowlanej, Rzeszow.

Bury-5.

4177 637.522.7 : 546 185-92

Janicki J., Niewiarowski A., Bury S. Tentatives of Using Polyphosphates in Meat Processing.

„Próby zastosowania polifosforanów w przetwórstwie mięsnym". Przemysł Spożywczy. No. 10, 1955, pp. 413—416, 3 tabs.

A sodium polyphosphate suitable for use in meat processing. 0.5 per cent additions of the polyphosphate enhance the quality of steamed meat products. Tested on Vienna and ordinary sausages it improved binding, fixed the colour and had a favourable effect on juiciness. 0.5 per cent additions of polyphosphate to pickle for injections improve the quality of pasteurized ham by binding meat juices better and thus eliminating „weeping" hams. Polyphosphates do not affect the pH of meat products and appear to have no effect on the flavour, colour and amount of jelly in hams; investigations should, however, be continued over this problem. The polyphosphate obtained can be used, in quantities of 1.2 g. per litre, for stabilizing blood.

BURY, Stanislaw, mgr inz.

New heat carriers in technological processes in industry.
Gosp paliw 13 no.4:111-114 Ap '65.

BURY, T., mgr inz.

Modern properties of general cargo cranes installed in Polish seaports. Tech gosp morska 12 no.6:169-170 Je '62.

1. Zarzad Portu, Gdynia.

BURY, Tadeusz, mgr., inz.

Dutch general cargo cranes of 3 tons lifting capacity. Tech gosp morska 11 no.12:364-366 '61.

1. Zarzad Portu, Gdynia.

BURY-ZALESKA, J.
DUTKIEWICZ, J.
CHRZASTOWSKI, K.

"Introductory Studies Concerning Protective Forestation of Rolling Areas." p. 183, (ROCZNIKI NAUK ROLNICZYCH. SERIA A-ROSLINNA, Vol. 66, no. 2, 1953, Warsaw, Poland).

SO: Monthly List of East European Accession, Lib of Congress, Vol 2, no 10, Oct. 1953, Uncl.

BUR'YA, Yu.; VASIL'YEVSKAYA, O.; KOBZIKOVA, Ye.; SMETANENKO, Ye.; SHMATOVA, M.

Sterilization of milk by high-frequency currents. Moloch. prom. 18 no.4: 27-29 '57. (MLRA 10:4)
(Milk--Sterilization) (Electric currents) (Conveying machinery)

BURYABASH, F. N. (Veterinary Surgeon, Stalinsk Council of People's Economy "Sovnarkhoz").

"About losses in meat industry due to helminth infestation in animals." Veterinariya, Vol. 38, No. 4, 1961, p. 71.

BURYABASH, F.N., veterinarnyy vrach

Losses in the meat industry caused by helminthiasis in animals.
Veterinariia 38 no.4: 71-72 Ap '61 (MIRA 18:1)

1. Stalinskiy sovet narodnogo khozyaystva.

BURYABASH, S. N. (Head, Oblast' Veterinary Polyclinic, Stalino), and PLYUSNIN, A. G. (Head, Verkhovtsevsk Inter-Raion Veterinary Bacteriological Laboratory, Dnepropetrovsk Oblast').

"Saratov ferments to be used in animal husbandry."

Veterinariya, Vol. 38, No. 4, 1961, p. 72.

BURYABASH, S.N.

Subclinical form of mastitis in cows. Veterinariia 40 no.6:57 Je '63. (MIRA 17:1)

1. Zaveduyushchiy Donetskoy oblastnoy veterinarnoy poliklinikoy.

BURYABASH, S.N.

Elimination of sterility in cows. Veterinariia 40 no.2:11-12 F'63.
(MIRA 17:2)

1. Zaveduyushchiy Donetskoy oblastnoy veterinarnoy poliklinikoy.

BURYABASH, S.N.; PLYUSNIN, A.G.

Put Saratov starter in the service of animal husbandry. Veterinariia 38 no.4:72-73 Ap '61 (MIRA 18:1)

1. Zaveduyushchiy Dnepropetrovskiy oblastnoy veterinarnoy poliklinikoy, Stalino (for Buryabash). 2. Zaveduyushchiy Verkhovtsevskoy mezhrayonnoy veterinarno-bakteriologicheskiy laboratoriyey, Dnepropetrovskaya oblast' (for Plyusnin).

BURYACHKO, V.R., inzh.

Optimum values of the basic parameters of centripetal turbines. Energomashinostroenie 7 no.9:24-27 S '61. (MIRA 14:9)
(Gas turbines)

D'YACHENKO, Nikolay Kharitonovich, doktor tekhn. nauk, prof.; DASHKOV, Sergey Nikitich, doktor tekhn. nauk, prof.; MUSATOV, Vitaliy Sergeyevich, kand.tekhn.nauk; BELOV, Pavel Mitrofanovich, kand. tekhn.nauk, prof.; BUDYKO, Yuriy Ivanovich, kand.tekhn.nauk. Prinimali uchastiye: BURYACHKO, V.R.; GUGIN, A.M.; ZHDANOVSKIY, N.S., doktor tekhn. nauk, prof., retsenzent; YURKEVICH, M.P., inzh., red. izd-va; PETERSON, M.M., tekhn. red.

[High-speed piston internal conbustion engines] Bystrokhodnye porshnevye dvigateli vnutrennego sgoraniia. Moskva, Mashgiz, 1962. 368 p. (MIRA 15:7)
(Gas and oil engines) (Diesel engines)

BURYACHKO, V.R.

Performance of a motor-vehicle diesel engine under partial loads. Avt. prom. 28 no.7:5-7 Jl '62. (MIRA 16:6)

(Diesel engines—Testing)

BURYAGIN, G., inzhener.

Flooring livestock buildings with "warm" concrete. Sel'. stroi. 12 no.7:20 Jl '57. (MLRA 10:8)
(Floor, Concrete)

L 05083-67

ACC NR: AP6013290 SOURCE CODE: UR/0413/66/000/008/0085/0085

24
B

AUTHOR: Buryachko, V. R.

ORG: none

TITLE: An electronic-pneumatic pressure indicator. Class 42, No. 180817 [announced by Military Academy of Logistics and Transportation (Voyennaya akademiya tyla i transporta)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 85

TOPIC TAGS: pressure measuring instrument, pneumatic device

ABSTRACT: This Author Certificate presents an electronic-pneumatic pressure indicator including a pneumatic controller of the reference pressure, an electric circuit for controlling the recording units, and a two-coordinate recorder. The design increases the sensitivity of the indicator and provides the possibility of remote recording of the indicating plots. The electric circuit is made in the form of a two-channel electronic-converter device. The terminal stages of the device form the appropriate automatic bridges which control the operating unit of the two-coordinate recorder (see Fig. 1). To obtain the indicating plot in the coordinates' "pressure-volume", a modulator which operates from a jointed shaft

Card 1/2 UDC: 531.787.085.3

L 05083-67

ACC NR: AP6013290

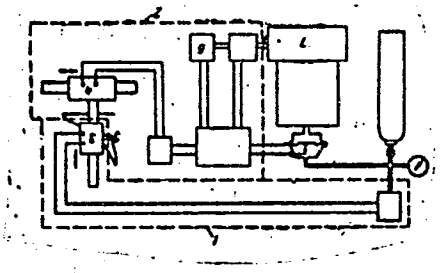


Fig. 1. 1 - electronic-converter device for the pressure; 2 - electronic-converter device for the time coordinate; 3 and 4 - automatic bridges; 5 - operating unit of the two-coordinate recorder; 6 - modulator; 7 - motor

of the motor is included in the converter channel of the time coordinate. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 18Jan65

Card 2/2 fv

ACC NR: AR6035389 (N) SOURCE CODE: UR/0398/66/000/009/B017/B017

AUTHOR: Buryachok, V. V.

TITLE: Laboratory investigation of wave-damping properties of a floating breakwater of elastic construction

SOURCE: Ref. zh. Vodnyy transport, Abs. 9B95

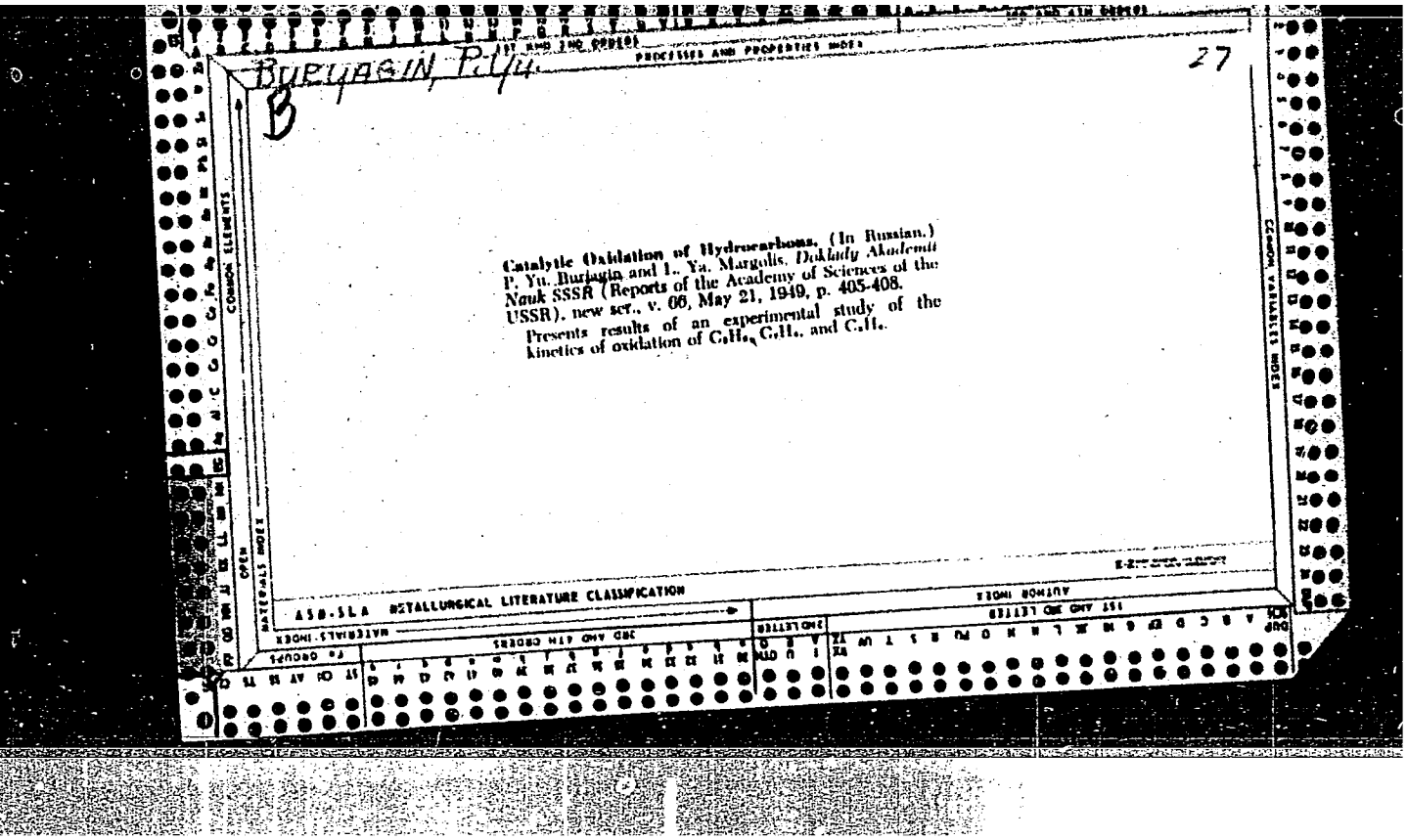
REF. SOURCE: Nauchn. tr. Upr. uchebn. zavedeniy M-va morsk. flota SSSR, no. 1, 1965, 92-95

TOPIC TAGS: harbor facility, harbor engineering

ABSTRACT: The main results are reported of investigations of a floating breakwater in the form of a cylindrical bottomless dome of elastic air-tight material, the edges of which are submerged below the water level and anchored. An empirical formula is presented for the wave damping coefficient, and also formulas for determining the optimal dimensions of the individual sections of the breakwater. A sample calculation of the shape and dimensions of the breakwater is presented. Recommendations for the use of the given breakwater design are presented. 2 illustrations. 1 table. [Translation of abstract]

SUB CODE: 13

Card 1/1 UDC: 627.235.001.5



and the frequency from

$$h\nu_0 = 2\mu H_0 .$$

This method has been used to determine the thermal aging of 2-mm thick protector rubber specimens with various antioxidants at 100, 120, and 140C temperatures in atmospheric air. The amplitude change ΔA of an arbitrary NMR signal is represented graphically as a function of time and temperature. At 120 and 140C temperatures a plateau is observed in the curves for aging times of 90 and 30 hours respectively. A table is presented of aging coefficients, comparing the oxidation kinetics of eleven specimens by the NMR method and a mechanical method. The NMR method is shown to be a useful means for investigating thermal aging in rubber. Orig. art. has: 3 formulas, 2 tables, and 1 figure.

ASSOCIATION: Voronezhskiy shinnyy zavod (Voronezh Tire Works); Voronezhskiy Gosudarstvennyy universitet (Voronezh State University)

SUBMITTED: 00 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: MT NO REF SOV: 002 OTHER: 000

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307710009-4"

BURYAK, A.D. (Melitopol').

Proving the median and area theorems of trapezoids. Mat. v shkole no.5:37 S-O '58. (MIRA 11:10)
(Trapezoid)

ASIKRITOVA, N.A., red.; BURTSEV, M.I., glavnyy inzh., red.; BURYAK, A.R., red.; GLOTOV, D.I., tokar', red.; ZAROVNYY, P.I., dispetcher, red.; NOSANOV, V.A., red.; TSEPKOV, I.V., red. [deceased]; AGISHEV, R.K., red.; MARKOVA, S.M., red.; KAYDALOVA, M.D., tekhn.red.

[Energomash; 25 anniversary of the Khabarovsk Electric Power Machinery Plant] Energomash; 25 let proizvodstvennoi deiatel'nosti Khabarovskogo zavoda energeticheskogo mashinostroeniia. Khabarovsk, 1958. 349 p. (MIRA 12:9)

1. Khabarovskiy zavod energeticheskogo mashinostroyeniya. 2. Khabarovskiy zavod energeticheskogo mashinostroyeniya "Energomash" (for all except Markova, Kaydalova). 3. Zaveduyushchaya partiynym kabinetom zavoda "Energomash" (for Asikritova). 4. Sekretar' partiynogo byuro zavoda "Energomash" (for Buryak). 5. Deputat Khabarovskogo gorodskogo Soveta deputatov trudyashchikhsya (for Glotov). 6. Direktor zavoda "Energomash" (for Nosanov).

(Khabarovsk--Machinery industry)

BURYAK, G.; TSANEV, K.

Quick method used in cytologic diagnosis of skin cancer.
Vop. onk. 11 no.12:40-45 '65. (MIRA 19:1)

1. Iz dermatologicheskoy kliniki i patologoanatomicheskogo otdeleniya pri Gosudarstvennom nauchno-issledovatel'skom onkologicheskom institute v Sofii (dir. - prof. doktor N. Anchev), Bolgarskaya Narodnaya Respublika.

SKROBOV, S.A., glav. red.; POPOV, G.G., otv. red.toma; BURYAK, G.V., zam. red. toma; SEMEYKIN, A.I., red. toma; TRIBUNSKIY, I.P., red. toma; PANOVA, A.I., red.izd-va; IVANOVA, A.G., tekhn. red.

[Geology of coal and combustible shale deposits in the U.S.S.R.] Geologiia mestorozhdenii uglia i goriuchikh slantsev SSSR. Moskva, Gosgeoltekhizdat. Vol.10.[Coal basins and deposits in Kamchatka and the northeastern part of the U.S.S.R.]Ugol'nye basseiny i mestorozhdeniia Severo-Vostoka SSSR i Kamchatki. Redkol.: G.G.Popov i dr. 1962. 403 p. (MIRA 15:12)

1. Russia (1923- U.S.S.R.)Ministerstvo geologii i okhrany nedr. (Soviet Far East--Coal geology)

SARAYKIN, I.M., prof.; BURYAK, I.A., veterinarnyy vrach

Treating acute enzootic bronchopneumonia in calves. Veterinariia 42 no.4:36 Ap '65. (MIRA 18:6)

1. Kishinevskiy sel'skokhozyaystvennyy institut.

BURYAK, I.V., inzh.

The 48-AE-1 electrodes for the manual welding of aluminum-magnesium alloys. Svarka 1:175-186 '58. (MIRA 12:8)
(Aluminum-magnesium alloys--Welding) (Electrodes)

BURYAK, I.V., inzh.

Effect of hydrogen and technological factors in electric arc welding of aluminum-magnesium alloys on the strength of weld joints. Svarka 2:182-194 '59. (MIRA 14:5)
(Aluminum-magnesium alloys--Welding) (Welding--Testing)

L 07869-67 EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k) IJP(c) JD/HM/JW/JH
ACC NR: AP6033518 SOURCE CODE: UR/0413/66/000/018/0149/0149

29
B

INVENTOR: Buryak, I. V.

ORG: none

TITLE: Electrode coating for welding aluminum-magnesium alloys. Class 49, No. 186266

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 149

TOPIC TAGS: aluminum alloy, magnesium containing alloy, alloy arc welding, welding electrode, electrode coating

ABSTRACT: This Author Certificate introduces an electrode coating for welding aluminum-magnesium alloys. The solder contains (%): 12—20 lithium fluoride, 20—30 barium chloride, 20—36 carnallite flux, 10—15 potassium chloride, 10—20 potassium fluoride, and 3—12 aluminum fluoride.

SUB CODE: 13/ SUBM DATE: 21Nov63/ ATD PRESS: 5101

UDC: 621.791.042.4'

Card 1/1 bc

BURYAK, K.A.

Calculating the constants of the reaction rate of SO_2 oxidation to SO_3 on a vanadium catalyst. Zhur. prikl. khim. 36 no.9:1890-1894 D '63. (MIRA 17:1)

BURYAK, K.A.; AMELIN, A.G.

Processing of a waste alkylation acid according to a simplified thermal method. Sbor. mat. po obm. opyt. NIUIF no.12:68-87 '62. (MIRA 16:12)

1. Nauchnyy institut po udobreniyam i insektofungisidam imeni prof. Samoylova.

BESKOV, V.S.; LIBERZON, L.M.; SLIN'KO, M.G.; Prinimali uchastiye AKIMUTIN, N.M. BURYAK, K.A.; SHINDEROVA, T.A.

Determining the static characteristics of a contact apparatus for the oxidation of sulfur dioxide in order to achieve the optimization of the process. Khim. prom. 40 no.9:678-680 S '64. (MIRA 17:11)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR (for Akimutin).
2. Nauchnyy institut udobreniy i insektofungisidov imeni professora Ya.V. Samoylova (for Shinderova).

SHANIN, S.A.; BALABAY, F.I.; KONONENKO, D.F.; MIKULIN, G.I. [Mykulin, H.I.]; BOROVSKAYA, N.V. [Borovs'ka, N.V.]; SHINKEVICH, A.P. [Shynkevych, A.P.]; LIBERZON, L.M.; AMELIN, A.G. [Amelin, A.H.]; BURYAK, K.A.; PECHONKIN, V.V. [Piechonkin, V.V.]; YATSENKO, N.N.; GAL'PERIN, N.I. [Hal'perin, N.I.]; PEBALK, V.L.; CHEKHOMOV, Yu.K.

Inventions and improvements; certificates of inventions. Khim.prom. [Ukr.] no.2:62-64 Ap-Je '65. (MIRA 18:6)

BUKYAK, Konstantin Fedorovich, shofer; AR'YEV, A.Yu., red.

[20 years behind the wheel] 20 let za rulem. Arkhangel'sk, Severo-Zapadnoe knizhnoe izd-vo, 1964. 29 p. (MIRA 18:8)

1. BURYAK, M. [redacted]
2. USSR (600)
4. Collective Farms
7. Work experience of a collective farm crew chief. Kolkh. proizv. 12 no. 10, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

BURYAK, M.A.

Effect of aminazine on experimental arrhythmia of central origin. Biul. eksp. biol. i med. 57 no.1:49-54 Ja '64.
(MIRA 17:10)

1. Kafedra farmakologii (zav. - prof. A.V. Val'dman) I Leningradskogo meditsinskogo instituta imeni Pavleva. Predstavlena deystvitel'nym chlenom AMN SSSR Zakusovym.

L 11386-67 EWT(1) SCTB DD/GD

ACC NR: AT6036512 SOURCE CODE: UR/0000/66/000/000/0086/0087

AUTHOR: Val'dman, A. V.; Buryak, M. A.; Spalva, Ye. A. 26

ORG: none

TITLE: The effect of aminazine (chlorpromazine), metamizil, and pentaphene (merpanit) on several vestibular reactions [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 86-87

TOPIC TAGS: biologic acceleration effect, coriolis acceleration, vestibular analyzer, blood chemistry, biologic secretion, central nervous system

ABSTRACT: The influence of aminazin, "Metamizil", and pentaphen on the following vestibular reactions of central origin was studied: Cardiac arrhythmia, disrupted coronary circulation, vascular reactions, nystagmus, and salivation. In acute experiments, electrical stimuli were administered to the vestibular nuclei located on the floor of the 4th ventricle in cats. EKG data reflected cardiac activity and coronary circulation. A mercury manometer was used to measure blood pressure in the carotid artery. Nystagmic movements of the right (control) eye were visually observed and contractions of external muscles of the left eye were mechanographically recorded at the same time. All preparations were injected intravenously.

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A 0.1—2.0 mg/kg dose of aminazin precluded the development of both nystagmus and cardiovascular reactions associated with stimulation of vestibular nuclei and those of the medulla reticular formation and pons Varolii immediately adjacent to them. However, the degree of the effect of aminazin varied significantly in individual tests and depended both on the dose and the structure stimulated. As a rule, aminazin did not decrease salivation.

"Metamizil" in relatively small doses (0.02—0.04 mg/kg) eliminated disruptions of cardiac rhythm and venous circulation. Vascular and particularly pressor reactions were more resistant to Metamizil. The tonic and phase component of the ocular muscle contraction was significantly decreased by 0.2—0.3 mg/kg of this cholinolytic. The effect of pentaphen on nystagmus was less pronounced than the effect of Metamizil; contrary to the action of the latter, the effects of pentaphen were not realized immediately after injection, but steadily increased until a maximum effect occurred after 10—15 minutes. Metamizil and pentaphen were effective in all experiments in which stimulation of the ponto-medullary section of the brain caused salivation.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307710009-4"

L 11386-67
ACC NR: AT6036512

This study shows that in selecting preparations for preventing motion sickness symptoms, cholinolytic agents are preferable. Metamizil was the most effective agent studied. The prospect of using adrenolytics (aminazin) is doubtful. The use of aminazin in combination with other preparations requires further investigation. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3 egk

BURYAK, M. K.

DZHUNKOVSKIY, Nikolay Nikolayevich, 1893- ; BURYAK, M.K., inzhener; DZHUNKOVSKAYA,T.N., inzhener; BAUMAN, V.A., laureat Stalinskoy premii, kandidat tekhnicheskikh nauk, nauchnyy redaktor; SHARKHUN, N.Z., redaktor; KRYNOCHKINA, K.V., tekhnicheskiy redaktor.

[Operator of building machinery] Motorist stroitelnykh mashin. 2., perer. i dop. izd. Moskva, Trudrezervizdat, 1953. 312 p. (MLRA 7:7)
(Building machinery)

AUTHOR: Buryak, P.G. (Giprokoks), 149

TITLE: Some new designs of coal bunkers. (Novyye resheniya ugol'nykh bashen.)

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry), 1957, No. 2, pp. 56 - 57, (U.S.S.R.)

ABSTRACT: A new design of a coke oven coal bunker incorporating an increase in the use of prefabricated reinforced concrete is described.
There are 2 diagrams and 3 tables.

BURYAK, P.G.

Construction of coal storehouses with sectional reinforced concrete. Shakht.stroi. no.3:31-32 Mr '59. (MIRA 12:4)

1. Trest Voroshilovskstroy.
(Coal--Storage)

BURYAK, P.G., inzh.

Precast reinforced concrete crane trestles. Prom. stroi. 37 no.9:52-54 S '59. (MIRA 13:1)

1.Khar'kovskiy Giprokoks.
(Cranes, derricks, etc.) (Trestles)

BUHYAK, P.G., inzh.; POSTERNAK, S.S., inzh.; GUTNIK, N.S., inzh.

Precast monolithic heat-resistant reinforced concrete constructions of coke-oven batteries. Prom.stroi. 37 no.12:27-29 D '59. (MIRA 13:4)

1. Giprokoks.
(Coke ovens) (Foundations) (Precast concrete construction)

BURYAK, P.G., inzh.

Using precast reinforced concrete in planning and building by-product coke plants. Prom. stroi. 38 no.8:44-47 '60. (MIRA 13:8)

1. Giprokoks.
(Coke industry--By-products)
(Precast concrete construction)

RUDNIK, V.Ya., kand.tekhn.nauk; ZHUKOV, A.A., inzh.; BURYAK, P.G., inzh.

Antivibration mountings for vibrational inertia screens. Prom. stroi. 40 no.2:37-38 '62. (MIRA 15:7)
(Screens (Mining)--Vibration)

BURYAK, P.G., inzh.; KOSTOGLODOV, V.V., inzh.

Experiment in the use of drainage under structures on sagging soils. Prom. stroi. 41 no.10:23-27 O '63. (MIRA 16:11)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy koksokhimicheskoy promyshlennosti.

BURYAK, V.A.

Tubular tank vacuum unit for tar rectification. Koks i khim. no.11:51-54 '61. (MIRA 15:1)

1. Dneprodzerzhinskiy koksokhimicheskiy zavod.
(Coal tar) (Distillation apparatus)

BURYAK, V. A.; SAVITSKAYA, T. L.[Savyts'ka, T. L.]

Basic parameters of the operating conditions of new rectifications columns of a tar distillation plant. Khim. prom.[Ukr.] no.1:19-22 Ja-Mr '62. (MIRA 15:10)

1. Dneprodzerzhinskiy koksokhimicheskiy zavod.

(Distillation apparatus)
(Coke industry—By-products)

BURYAK, V.A.

Universal drum-type crystallizer for the crystallization of the naphthalene fraction in a thin layer. Koks i khim. no.6:44-48 '63. (MIRA 16:9)

1. Dneprodzerzhinskiy koksokhimicheskiy zavod.
(Coke industry--Equipment and supplies) (Naphthalene)
(Crystallization)

BURYAK, V.A.

Dependence of the mineralization of ancient (Pre-Cambrian) formations on regional metamorphic zoning (Vitim-Patom Plateau). Dokl. AN SSSR 163 no.2:435-438 Jl '65. (MIRA 18:7)

1. Institut zemnoy kory Sibirskogo otdeleniya AN SSSR. Submitted March 25, 1965.

BURYAK, V.A.

Relationship of gold-bearing quartz veins to the gold-sulfide mineralization of enclosing rocks in the deposits of Pre-Cambrian gold-ore formation (Lena gold-bearing region). Dokl. AN SSSR 165 no.5:1139-1142 D '65.

(MIRA 19:1)

1. Institut zemnoy kory Sibirskogo otdeleniya AN SSSR. Submitted June 23, 1965.

BURYAK, V.D., inzh.

Eliminating steam smothering systems in fuel tanks. Sudostroenie 27 no.12:17-18 D '61. (MIRA 15:1)
(Ships--Fires and fire prevention)

BURYAK, V.D., inzh.

Advisability of using steam smothering systems on freighters. Sudostroenie 29 no.5:16-17 My '63. (MIRA 16:9)
(Ships—Fires and fire prevention)

BURYAK, V.D., inzh.

Choice of emergency electric stations for ships. Sudostroenie 29 no.11:35 N '63. (MIRA 16:12)

BURYAK, V.D., inzh.

Application of silver ions to the water softening process on board ships. Sudostroenie 30 no.1:17 Ja '64. (MIRA 17:3)

UTTS, V.N., kand.tekhn.nauk; BURYAKOV, V.I., inzh.

General resistance formula during the comparative movements of particles and medium. Izv.vys.ucheb.zav.; gor.zhur. 7 no.2:170-173 '64. (MIRA 17:3)

1. Karagandinskiy politekhnicheskiy institut. Rekomendovana kafedroy fiziki Karagandinskogo politekhnicheskogo instituta.

ZHABREV, I.P.; BURYAK, V.N.

Some problems of the Middle Pliocene stratigraphy of the Taman Peninsula. Trudy KF VNII no.1:95-99 '59. (MIRA 16:9)
(Taman Peninsula--Geology, Stratigraphic)

BURYAK, V.N.

History of the geological development of the Eastern Kuban trough in the Neogene. Trudy KF VNII no.1:190-201 '59. (MIRA 16:9)
(Kuban-Azor Lowland--Geology)

ROSTOVTSEV, K.O.; BURYAK, V.N.

Principla stages in the development of the eastern Kuban Lowland and adjacent areas in the Greater Caucasus and their latest structure. Izv. vys. ucheb. zav.; geol. i razv. 2 no.2:36-49 F '59. (MIRA 12:10)

1.Krasnodarskiy filial vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.
(Caucasus--Geology, Structural)

BURYAK, V.N.

New data on Maeotic sediments in western Kuban. Trudy KF VNII no.2:75-78 '59. (MIRA 13:11)
(Kuban--Geology, Stratigraphic)

BURYAK, V.N.

Miocene sediments in the eastern Kuban Valley. Trudy KF VNII no.3:67-80 '60. (MIRA 13:11)
(Kuban Valley--Geology, Stratigraphic)

BURYAK, V.N.

Stratigraphy of the lower and middle Pliocene in the central part of the western Kuban trough. Trudy KF VNII no.6:198-201 '61. (MIRA 15:2)

(Kuban-Azov Lowland--Paleontology, Stratigraphic)

BOGDANOVICH, A.K.; BURYAK, V.N.

New data on the Tarkhan horizon of the western Kuban trough.
Dokl. AN SSSR 155 no. 4:806-809 Ap '64. (MIRA 17:5)

1. Krasnodarskiy filial Vsesoyuznogo neftyanogo nauchno-issledovatel'skogo instituta. Predstavleno akademikom D.V. Nalivkinym.

MERKLIN, R.L.; BOGDANOVICH, A.K.; BURYAK, V.N.

Fauna form the upper part of the Ritsa sediments of the Kuban and Bol'shoy Zelenchuk Rivers (Northern Caucasus). Biul. MOIP Otd. geol. 39 no.4:52-56 Jl-Ag '64.

(MIRA 17:10)

PETROV, Dmitriy Mikhaylovich; BURYAK, V.S., ass., red.

[Design of a reflex klystron] Raschet otrazhatel'nogo klistrona; posobie dlia kursovogo proektirovaniia. Moskva, Mosk. energ.in-t, 1962. 101 p. (MIRA 16:8)
(Klystrons)

ACCESSION NR: AP4040752 S/0142/64/007/002/0212/0219

AUTHOR: Buryak, V. S.

TITLE: Design of a multimode rectangular-waveguide junction

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 2, 1964, 212-219

TOPIC TAGS: waveguide coupler, waveguide diffraction, waveguide propagation, waveguide iris

ABSTRACT: In view of the increasing interest in waveguides of increased cross section, which offer certain advantages over standard waveguides, the author derives general formulas for the determination of the electromagnetic field in the region of junction between rectangular waveguides of equal height. The method involves a simultaneous determination of all the relative amplitudes of the higher modes that can propagate from the junction, a procedure which greatly reduces the volume of computation. The method is also applicable to

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ACCESSION NR: AP4040752

the subdivision of a waveguide by means of several partitions, and also to junctions of round waveguides with azimuthally symmetrical modes. Orig. art. has: 5 figures and 22 formulas.

ASSOCIATION: None

SUBMITTED: 15Jun63 DATE ACQ: ENCL: 02

SUB CODE: EC NR REF SOV: 003 OTHER: 004

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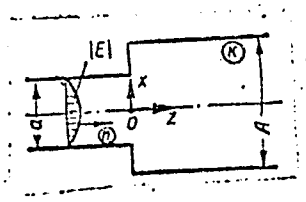
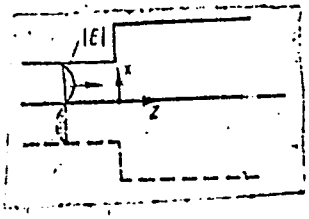
ENCLOSURE: 01

ACCESSION NR: AP4040752



Symmetrical junction of two rectangular waveguides of equal height



Asymmetrical junction of two waveguides

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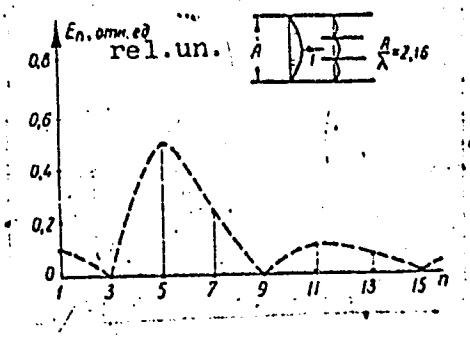
ACCESSION NR: AP4040752

ENCLOSURE: 02



Amplitudes of electrical field of H_{n0} reflected waves in a waveguide partitioned into three identical channels.

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24 (3), 18 (6)

AUTHORS: Kikoin, I. K., Academician, Buryak, Ye. M., Muromkin, Yu. A. SOV/20-125-5-16/61

TITLE: On the Anomalously High Hall-effect in the Ferromagnetic Alloy Chromium-tellurium (Ob anomal'no bol'shom effekte Kholla v ferromagnitnom splave khrom-tellur)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5, pp 1011-1014 (USSR)

ABSTRACT: In the investigation of the galvanomagnetic effects in ferromagnetic alloys consisting of non-ferromagnetic components, the authors observed an anomalously high ferromagnetic Hall-coefficient in the alloy chromium-tellurium (50 atom %). By ferromagnetic Hall-coefficient the authors mean the amount of the coefficient R_J defined by the equation $\vec{E} = R_J[\vec{J}\vec{j}] + R_o[\vec{H}\vec{j}]$. To this equation there corresponds the equation $U_H = R_J J\frac{i}{d} + R_o H\frac{i}{d}$. Here $\vec{E}$ denotes the electric field strength, U - the potential difference corresponding to it, which occurs in the sample with the amperage $\vec{j}$ under the

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influence of a transversal magnetic field $\vec{H}$ and the corresponding magnetization $\vec{J}$, d - the thickness of the sample, R_0 - the "classical" Hall coefficient. For ordinary (non-ferromagnetic) metals the first term of the right sides of the two equations written down above are equal to zero. For the theory of galvanomagnetic effects investigation of each of the two coefficients R_J and R_0 is of interest. In the present paper attention is concentrated upon R_J. In a table the value of R_j of the above mentioned chromium-tellurium alloy is compared with the value of this coefficient for other ferromagnetics. In view of the temperature dependence of R_J the comparison is carried out for equal values of the reduced temperature T/Θ, where Θ denotes Curie temperature. For the above mentioned alloy it holds that $\Theta = 54^\circ$ (according to measurement of the magnetocaloric effect). As far as the authors know such a high ferromagnetic Hall coefficient (100 times as high as in the case of iron) is observed for the first time. Particular interest is caused by the temperature dependence of the Hall

effect and especially by its measurement when passing through the Curie point. The relatively low Curie temperature and the high Hall effect render the here investigated alloy especially suited for such investigations. The authors therefore investigate the temperature dependence of the Hall effect in the alloy Cr-Te below as well as above Curie point. (From the temperature of liquid nitrogen to 300°). The present paper describes the most important results obtained firstly with respect to the Hall effect below Curie point. A diagram shows the dependence of the difference of Hall potentials U_{Hi}^{d} on the magnetic field strength H at various temperatures. R_J is directly connected with the square J_{sp}^2 of spontaneous magnetization. The observed temperature dependence of R_J is probably due to the temperature dependence of the spontaneous magnetization J_{sp}. It holds that $R_J = a(\beta - J_{sp}^2)$. The constant β agrees with sufficient accuracy with J_o^2, the

square of spontaneous magnetization at absolute zero. Thus, it holds that $R_J = a(J_o^2 - J_{sp}^2)$. Above Curie point the difference U_H of Hall's potentials is proportional to the magnetic field strength and also in the ordinary metals: $U_H = RH\frac{i}{d}$. The authors in the aforementioned alloy check the correctness of the previously found relation (Ref 7) $U_H = R_p \chi H\frac{i}{d} + R_1 H\frac{i}{d}$ or $R = R_p \chi + R_1$. Here χ denotes magnetic susceptibility and R_p the paramagnetic Hall-coefficient. The "paramagnetic" component of the Hall coefficient actually obeys the Curie-Weiss law. There are 4 figures, 1 table, and 7 references, 3 of which are Soviet.

SUBMITTED: January 24, 1958

Card 4/4

30072
S/048/61/025/011/018/031
B104/B102

21.2100

AUTHORS: Karchevskiy, A. I., and Buryak, Ye. M.

TITLE: Intensity of magnetization and magnetocaloric effect in uranium hydride and uranium deuteride

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 11, 1961, 1387 - 1388

TEXT: The results of a study of the magnetization of UH_3 and UD_3 at 4.2 and 77.4°K in magnetic fields of up to 23 koe are presented. The temperature dependence of magnetization was examined near the Curie point of these compounds along with the magnetocaloric effect over a wide range of magnetic field strengths. The paramagnetic susceptibility of both compounds was measured in the temperature range of 230 - 500°K. In fields of up to 23 kilooersteds the intensity of magnetization of UH_3 at 4.2 and 77.4°K was by 6% higher than that of UD_3. The temperature dependence of the magnetic susceptibility of both compounds cannot be described by the well-known Curie-Weiss formula. The relation $\chi_{mole} = c_{mole}/(T-T_0)+\chi_0$ is indicated

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Intensity of magnetization...

for the susceptibility. $c_{mole} = 0.624$ deg·mole^{-1}, χ_0 does not depend on temperature, and is equal to $+40 \cdot 10^{-5}$ g·mole^{-1} for both substances. The paramagnetic Curie point of UH_3 is at +176°K, while that of UD_3 is at +175°K. In a field of 17 koe, the magnetocaloric effect in UH_3 is equal to 0.53°C, and in UD_3 equal to 0.4°C. The difference in the magnitude of the caloric effect is due to two factors: 1) The total specific heat of UD_3 near the Curie point is by 20% higher than that of UH_3; 2) $(\partial I/\partial T)_H$ near the Curie point is by 17% higher in UH_3 than in UD_3. I is the intensity of magnetization. Academician I. K. Kikoin is thanked for interest and discussions. There are 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: Lin S. T., Kaufmann A. Ya., Phys. Rev., 102, 640 (1956); Henry W. E., Phys. Rev., 109, 1976 (1958); Abraham B. M., Osborne D. W., Flotow H. E., Marcus R. B., J. Amer. Chem. Soc., 82, 1064 (1960).

Card 2/2

34636
S/056/62/042/002/011/055
B102/B138

24.2200

AUTHORS: Karchevskiy, A. I., Buryak, Ye. M.

TITLE: Magnetic properties of the β-modification of uranium hydride and deuteride

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 2, 1962, 375-382

TEXT: Magnetization, paramagnetic susceptibility and magnetocaloric effects of β-UH_3 and β-UD_3 (cubic lattice with a = 6.632 Å and 6.625 Å, resp.) were studied by the usual methods at low temperatures (4.2-210°K). The susceptibility measurements were also carried out in the range 200-500°K. The molar magnetization of UH_3 was found to be only 6% higher than that of UD_3, independent of external magnetic field. The results of W. E. Henry (Phys. Rev. 109, 1976, 1958). The Curie points determined from the temperature dependence of the spontaneous magnetization were 181°K for UH_3 and 177.5°K for UD_3; from the maximum of the magnetocaloric effect

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Magnetic properties of the ...

182.0°K was obtained for UH_3 and 178.4°K for UD_3. The magnetocaloric effect at the Curie point in UH_3 is 1.4 ± 0.15 times higher than in UD_3. The molar magnetic susceptibility is given by $\chi_{mol} = C_{mol}/(T - \theta_p) + \chi_0$, which is valid for both UH_3 and UD_3 with

$$C(UH_3) = C(UD_3) = 0{,}624;$$
$$\chi_0(UH_3) = +40 \cdot 10^{-5}; \chi_0(UD_3) = +43 \cdot 10^{-5} \quad (3).$$
$$\theta_p(UH_3) = 176{,}1°K; \quad \theta_p(UD_3) = 175{,}2°K.$$

The results of the measurements are in agreement with calorimetric ones. From the results obtained the following conclusions are drawn: The shift of the Curie point due to the substitution of H by D is +3.5 ± 0.5°K. The difference in the magnetocaloric effects at Curie point may be explained as follows: (a) $(\partial\sigma/\partial T)_H$ is higher for UH_3 than for UD_3, due to the temperature dependence of the spontaneous magnetization of these compounds; and (b) the specific heat of UD_3 exceeds that of UH_3. The difference in the magnetization ratio, $\sigma(UH_3)/\sigma(UD_3) = 1.08$ at low temperatures and

$\sigma_s(UH_3)/\sigma_s(UD_3) = 1.17$ at the Curie points, shows that the temperature dependence of spontaneous magnetization is different for the two compounds. The magnetic moments only differ in the ferromagnetic, not in the paramagnetic, temperature range. The paramagnetic Curie points, Θ_p, are almost equal. Academician I. K. Kikoin is thanked for discussions, B. N. Samoylov for advice and laboratory assistants A. S. Nikishina and V. D. Yakovlev for help. There are 6 figures and 10 references: 4 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as follows: W. E. Henry. Phys. Rev. 109, 1976, 1958; H. E. Flotow et al. J. Am. Chem. Soc. 81, 3529, 1959; B. M. Abraham et al. J. Am. Chem. Soc. 82, 1064, 1960. S. T. Lin, A. R. Kaufman. Phys. Rev. 102, 640, 1956.

SUBMITTED: August 10,1961

Card 3/3

Mh519
S/181/63/005/001/052/064
B104/B186

AUTHORS: Buryak, Ye. V., Kaufman, S. A., and Kulikov, K. M.

TITLE: Hole trapping cross section of singly charged gold ions in germanium

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1, 1963, 345-347

TEXT: The majority carrier lifetime τ was determined from the production-recombination noise in p-type germanium single crystals alloyed with gold and antimony. The latter was added to compensate uncontrolled acceptors. The concentration of gold was $2\cdot10^{15}$ cm^{-3} and that of the recombination centers was $\simeq 10^{14}$ cm^{-3}. According to L. Johnson, H. Levinstein (Phys. Rev., 117, 1191, 1960), T. P. Vogl, I. R. Hansen, and M. Garbuny (J. Opt. Soc. Am., 51, no. 1, 70, 1961) the following equation holds for the square of the voltage of produotion-recombination noise:

$$U_{m.}^{2\prime} = \frac{4U^2R^2R_{m.}^2\Delta f}{(R+R_{m.})^4pV}\,\frac{\tau}{1+4\pi^2f^2\tau^2}, \qquad (1),$$

where $U_{ш} \equiv U_{noise}$, R is the resistance of the specimen, $R_{\text{л}}$ is the load resistance connected in series with the specimen, U is the battery voltage, V is the volume of the specimen, p is the majority carrier concentration, f is the frequency, Δf is the band width of the measuring unit. From this expression it follows that the majority carrier lifetime in the plateau range ($f \ll 1/\tau$) of the frequency dependence of the noise can be calculated from

$$\tau = \frac{U_{ш}^2 (R + R_{\text{л}})^4 pV}{4U^2 R^2 R_{\text{л}}^2 \Delta f};$$

In the range of decreasing frequency dependence, τ can be calculated from $\tau = 1/2\pi f_{1/2}$, where $f_{1/2}$ is the frequency at which U^2_{noise} drops to half the value at frequencies in the plateau range. p and the recombination center concentration N_g were determined from the temperature dependence of the Hall coefficient. The noise spectrum was measured in the frequency ranges 30 - $3 \cdot 10^5$ cps and $1.6 \cdot 10^5$ - 10^7 cps by two devices. The value

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S/181/63/005/001/052/064
B104/B186

Hole trapping cross section...

$(1\text{-}1.6)\cdot 10^{-14}$ cm^2 was obtained for the hole trapping cross section by means of the τ values and the relation $\sigma_p^- = 1/\bar{v}_T \tau N_\delta$, where v_T is the mean thermal velocity of the carriers. There are 2 figures and 1 table.

SUBMITTED: September 5, 1962

Card 3/3

BURYKINA, A.L. (Kiyev); YEVTUSHOK, T.M. (Kiyev)

Titanium and zirconium carbide coatings on graphite. Izv. AN SSSR. Met. i gor. delo no.5:147-149 S-O '64. (MIRA 18:1)

BRUNOVA, R.Ya.; BURYAKOV, A.G.; ZUSMANOVICH, V.M.

Reproduction of semitones in the black-and-white television image. Tekh. kino i telev. no. 8:9-18 Ag '58. (MIRA 11:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut televideniya.
(Television--Transmitters and transmission)